

## Claims

A method of designing, managing and controlling laboratory routines, comprising:

1. Providing at least a computer server that is able to
  - i. Store databases of the series of human instructions and computer commands to perform laboratory or laboratory-related processes;
  - ii. Authenticate users and provide the differentiated level of access to the informational segments;
  - iii. Direct and prompt users to identify and perform a laboratory process;
  - iv. Store the work data resulted from claim 1-i.
2. Providing at least a computer client that is able to
  - i. Support user interaction with computer server through graphical user interface;
  - ii. Input the user-designed series of human instructions and computer commands for laboratory scientists and computer commands;
  - iii. Enable users to select a series of instructions for laboratory scientists and computer commands;
  - iv. Respond to and complete the said series of instructions and commands;
  - v. Input the work data resulted from claim 2-iii.
3. Providing means to pre-define the groups of laboratory scientists with discretionary security access rights;
4. Providing means to manage the series of said pre-defined instructions and computer commands including:
  - i. Classify the types of said series and determination of the final aims;
  - ii. Input the instructions for laboratory scientists and update the existing ones;
  - iii. Associate the instructions and computer commands with laboratory or laboratory-related processes;

- iv. Determine the sequence of instructions and computer commands in the series;
  - v. Manage and document the evolution history and audit trail of a pre-defined human instructions and computer commands;
5. Providing means to execute the computer commands;
  6. Providing means from inside a first said series of instructions for laboratory scientists and computer commands in claim 1-i to call another said series of human instructions and computer commands in claim 1-i;
  7. Providing means to verify the completion of a series of pre-defined instructions and computer commands by an identifiable computer client with the date and time of completion;
  8. Providing means to report the status of the said claim 2

Whereby the individual series of instructions for laboratory scientists and computer commands for a laboratory or laboratory-related routines can be designed, customized and implemented;

Whereby the series of instructions for laboratory scientists and computer commands for a laboratory or laboratory-related routines can educate, suggest, guide and prompt the scientists;

Whereby the laboratory managers and scientists can track, monitor and control the quality of the laboratory or laboratory-related routines.

Whereby the laboratory scientists can follow and share the same series of instructions and computer commands to repeat tasks.

Whereby the results and processes of the completion of a series of instructions and computer commands can be documented.

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